

SUMMARY

Tank Waste Remediation System (TWRS) Project consists of Management Support, Work Breakdown Structure (WBS) 1.1.1.1, Project Baseline Summary (PBS) TW10; Tank Farm Operations, WBS 1.1.2.1, PBS TW03; Tank Safety Issue Resolution, WBS 1.1.2.2, PBS TW02; Tank Waste Characterization, WBS 1.1.2.4, PBS TW01; Retrieval Project, WBS 1.1.3.1, PBS TW04; Immobilized Tank Waste Storage and Disposal, WBS 1.1.3.4, PBS TW09; Process Waste Support WBS 1.1.3.5, PBS TW05; Privatization Phase I and II, WBS 1.1.3.6 and 1.1.3.7, PBS TW06 and TW07; and, Privatization Infrastructure, WBS 1.1.3.8, PBS TW08.

TWRS performance for the month was good. Significant events included the following:

Completed the TWRS Phase 1 Privatization Site Characterization Draft Data Package (Project W-519) 13 days ahead of schedule (planned February 13, 1998). The draft package includes the results from the Field Sampling Plan described in the TWRS Phase 1 Privatization Site Environmental Baseline and Characterization Plan (HNF-SD-TWR-EV-001, Reference 3).

Heavy rains resulted in the need to pump Catch Tank 241-A-350 on an expedited basis. Intensive coordination resolved the problem with one-day turnaround time. The Justification for Continued Operation (JCO) addressing the Clean Out Box Unresolved Safety Question (USQ) was developed.

TWRS supported Bechtel Hanford, Inc. (BHI) to complete the planning document to manage the vadose zone integration work on February 13, 1998. This plan initiated Phase 2 which begins the sitewide integration project.

Obtained Washington State Department of Health (WDOH) approval of upgrades to the air monitoring system for Project W-030, "Tank Farm Ventilation Upgrades."

The FY 1998 Multi Year Work Plan (MYWP) is not yet approved although the baseline change request (BCR) transitioning the work scope is in process. Milestone statistics are based on the proposed baseline. Fiscal-year-to-date performance (Enforceable Agreement, DOE-HQ, Field Office, and RL) shows seven milestones (50 percent) were completed on or ahead of schedule; two milestones (14 percent) were completed late; five milestones (36 percent) are overdue; and eight milestones are forecast late. Details on the overdue and in jeopardy milestones can be found in the Milestone Exception Report (Page F:VI.-1).

There are 22 FY 1997 milestones that were not completed. BCR TWR-98-033 bridging the FY 1997/FY 1998 work scope is in process.

ACCOMPLISHMENTS

- Transferred 6,000 gallons of waste from 244-S to 241-SY-102 in preparation for saltwell pumping (planned).
- Awarded 241-C-106 Heel Retrieval subcontracts four days early (planned February 13, 1998).
- Obtained three core samples and three grab samples from five tanks (241-AN-102, 241-AX-101, 241-AX-102, 241-SX-101, and 241-TX-104) (T01-98-113/T01-98-116).
- Obtained a sample for the organic complexant program from 241-AX-102 using the "finger trap" sampler (planned).

COST PERFORMANCE (\$M)

	BCWP	ACWP	VARIANCE
TWRS	\$ 120.9	\$ 114.6	\$ 6.4

The five percent favorable cost variance decreased \$2.8 million during the month. The non-accrued subcontractor cost is down to \$1.5 million due to emphasis on finalizing financial system coding structures/amounts. The favorable cost variance is also attributed to Characterization activities underrunning and efficiencies in Feed Process System Definition activities such as Interface Control Drawing (ICD) issue studies, system description, and feed delivery authorization basis (AB) work. Efficient use of resources, particularly on Projects W-211, "Initial DST Retrieval System," and W-320, "106-C Sluicing," have contributed approximately \$2 million. Potential emerging scope for Project W-320 (such as Tank 241-AY-102 testing and jumper fabrication, thermocouple repairs, and Pacific Northwest optimization tests) may require partially utilizing these underruns.

SCHEDULE PERFORMANCE (\$M)

	BCWP	BCWS	VARIANCE
TWRS	\$ 120.9	\$ 132.5	(\$11.6)

The nine percent unfavorable schedule variance is due to direction to stop work on planned baseline activities and proceed with new work scope. Unfavorable schedule variances will continue to be incurred until in-process BCRs are approved and rebaselined. An extensive dome load analysis requirement driven by the Basis for Interim Operation (BIO) implementation caused sampling to fall behind schedule due to delays in

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Rotary Mode Core Sampling (RMCS). Dome loading analysis requirements have been reassessed and procedures modified. RMCS commenced and efforts are underway to recover the schedule. Inactive Miscellaneous Underground Storage Tanks (IMUST) coordination activities' delays were due to late placement of task orders on gas ventilation modifications delaying the feasibility study. Double contained receiver tank (DCRT) activities remain behind schedule due to lack of Operations resources to obtain vapor samples. Retrieval ICD issue resolution was not started as resources were diverted to higher priority efforts. Retrieval system definition work was placed on hold while alternative project requirements' scope was further defined. On Project W-151, "Tank 101-AZ Waste Retrieval System," readiness assessment was delayed as resources were diverted to support other higher priority work scope; specifically, Project W-030, "Tank Farm Ventilation Upgrade," Operational Readiness Review (ORR) and Project W-058, "Cross Site Transfer System," readiness assessment. Project W-314, "Tank Farm Restoration and Safe Operations," master pump shutdown design and 200 East/West design activities are behind schedule which will be recovered by using previous designs to reduce duplication.

ISSUES

- 1) **Project W-030, "Tank Farm Ventilation Upgrade."** Resolution of ORR findings delayed Project W-030 startup.

Strategy/Status: Tri-Party Agreement BCR M-43-97-04 was approved, extending the National Emission Standards for Hazardous Air Pollutants (NESHAP) Federal Facility Consent Agreement (FFCA) date to March 29, 1998. WDOH concerns were resolved. A revised corrective action plan for the ORR pre-start findings will be completed by March 13, 1998. Work continues to resolve pre- and post- start-up findings.

- 2) **209E Facility Authorization Basis.** The current 209E Facility AB is incomplete.

Strategy/Status: A revised JCO was completed. A draft Safety Evaluation Report (SER) and USQ Closure was prepared.

- 3) **Single Shell Tank (SST) Authorization Basis.** The SST AB amendment addressing flammable gas group 2 tanks has not been approved and has delayed pumping two tanks and all remaining Tri-Party Agreement milestones.

Strategy/Status: Approval of the SER is behind schedule but is rescheduled for March 30, 1998. The proposed SER does not support the saltwell pumping schedules. Ecology disapproved the Tri-Party Agreement BCR requesting delay of M-41-22 and M-41-23.

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- 4) **Tank 241-SX-104:** Anomalous level readings on Tank 241-SX-104 resulted in an extensive investigation to determine if the tank is leaking.

Strategy/Status: A review of the delta level/delta pressure (DL/DP) is in progress; installation of a video camera and dry well testing is complete. Air permitting was approved by WDOH and is in review by the U.S. Environmental Protection Agency (EPA). Preliminary findings are that Tank 241-SX-104 is not leaking; final determination is expected March 30, 1998.

- 5) **Tank 241-SY-101:** This tank is exhibiting a slow rise in the surface level. Gas is most likely accumulating in or under the floating crust; current tank surface level response to mixer pump operation is not consistent with behavior assumed in safety analysis.

Strategy/Status: A USQ was declared on February 26, 1998. The path forward includes preparing for retained gas sampling, confirming level measurements, evaluating other means of level measurement, evaluating mixer pump operating parameters and variations, preparing for characterization activities, and integrating data analysis.

1998

COST VARIANCE ANALYSIS

WBS/PBS	COST VARIANCE: \$6.4M	
TWRS Management Support 1.1.1.1/TW10	Description and Cause: The favorable cost variance (\$0.6M; 4%) is within the 5 percent threshold.	
Tank Farm Operations 1.1.2.1/TW03	Description and Cause: The unfavorable cost variance (\$1.8M; 4%) is within the 5 percent threshold.	
Tank Safety Issue Resolution 1.1.2.2/TW02	Description and Cause: The favorable cost variance (\$2.2M; 18%) is a result of not accruing approximately 40% of subcontractor costs. Level of effort AB resources have been diverted to higher priority Operations and Disposal activities.	Impact: Total accruals have not been made, thus making it difficult to accurately monitor and control costs. Corrective Action: Managers are working to get costs fully accrued in the system. Full resources will be restored to resume Safety activities in the next few months.

1998

COST VARIANCE ANALYSIS

WBS/PBS	COST VARIANCE: \$6.4M	
Tank Waste Characterization 1.1.2.4/TW01	Description and Cause: The favorable cost variance (\$2.7M; 15%) is due to fewer computer procurements, subcontractor support on characterization data development and sampling, and outside contractor commitments than originally planned.	Impact: No impacts, as the favorable cost variance will be reduced to recover the sampling schedule in the final six months of the fiscal year. Corrective Action: Estimated costs at completion are being developed. Additional resources will be required to recover the sampling schedule. The contractor billings will be fully utilized by year end.

1998

COST VARIANCE ANALYSIS

WBS/PBS	COST VARIANCE: \$6.4M	
Retrieval Project 1.1.3.1/TW04	Description and Cause: The favorable cost variance (\$2.2M; 10%) is due to: 1) Project W-211, "Initial DST Retrieval System," labor underruns in contractor design review support; 2) Project W-320, "106-C Sluicing," labor efficiencies due to advanced staging of materials and equipment, minimal work stoppages, and selective use of dedicated resources; 3) Hanford Tanks Initiative (HTI) resource diversion to higher priority scopes and less effort required on the DQO process and cone penetrometer; 4) Feed Process System Definition activities efficiencies (\$321K); 5) \$492K overruns on Readiness-To-Proceed (RTP) activities plus \$281K overrun in project management and integration activities	Impact: Impacts are: 1) W-211 design packages will be issued for review in the next few months, spending the underrun; 2) A BCR is in process to utilize W-320's underrun to add ORR activities; 3&4) HTI and Feed Process System Definition activities' underruns will be recovered later in the year; and, 5) RTP cost overruns are not recoverable. Corrective Action: 1) W-211 subcontractor efforts are ramping up with the variance expected to be eliminated by the end of March. 2) W-320 will utilize additional resources to recover schedule variances and fund emerging scope (implement BIO/W-030 ORR lessons learned) via an in-process BCR. 3) HTI will utilize their resources later this year. 4) Feed Process System Definition will utilize resources to complete the cone penetrometer. 5) RTP is requesting additional resources via BCR TWR-98-018.

1998

COST VARIANCE ANALYSIS

WBS/PBS	COST VARIANCE: \$6.4M	
Immobilized Tank Waste 1.1.3.4/TW09	Description and Cause: The unfavorable cost variance (\$0.7M; 27%) is due to higher expenditures to complete the Conceptual Design Report (CDR) for Project W-464, "Solidified High-Level Waste Interim Storage Facility." BCRs TWR-98-019 and TWR-98-043 (which adjust the schedule) are still in process.	Impact: Project W-464 CDR overruns will reduce funding available for W-520, "Immobilized LAW Disposal Facility," CDR which is just starting. Reduction in funding will not impact the W-520 schedule/quality. Corrective Action: Approve BCRs and reduce the budget for Project W-520.
Process Waste Support 1.1.3.5/TW05	Description and Cause: The favorable cost variance (\$0.7M; 11%) was realized by efficiencies on the system definition support to ICD 22, Air Emissions (\$65K).	Impact: The variance will be eliminated as ICD support increases. Corrective Action: Support will increase later in the fiscal year as final ICDs are submitted.

1998

SCHEDULE VARIANCE ANALYSIS

WBS/PBS	SCHEDULE VARIANCE (\$11.6M)	
TWRS Management Support 1.1.1.1/TW10	Description and Cause: The unfavorable schedule variance (\$0.8M; 5%) is within the threshold	
Tank Farm Operations 1.1.2.1/TW03	Description and Cause: The unfavorable variance (\$2.2M; 5%) is within the threshold.	

1998

SCHEDULE VARIANCE ANALYSIS

WBS/PBS	SCHEDULE VARIANCE (\$11.6M)	
Tank Safety Issue Resolution 1.1.2.2/TW02	<p>Description and Cause: The unfavorable schedule variance (\$1.0M; 8%) is slipping best-estimate modifications to the analytical tool software to support completion of the SST safety analysis; awaiting revised schedule completion dates. IMUST coordination activities started late. Late placement of task orders deferred a gas ventilation modification feasibility study, and DCRT activities remain behind schedule due to lack of Operations resources to obtain vapor samples.</p> <p>Lightning air terminal installation was temporarily placed on hold on February 4, 1998, when an arc occurred during installation on a light pole in U farm.</p>	<p>Impact: Closure of the Flammable Gas USQ may be delayed. Delays in the submittal of the AB amendment package for closure of the SSTs is expected in order to accommodate Tier 2 review comments and feedback from expert panel meetings.</p> <p>Corrective Action: BCR TWR-98-030 is in process to incorporate the data correlation study activities into the baseline. However, after expert elicitation workshops, a subsequent BCR will be needed to address additional scope requirements. The walk down for riser configurations of IMUSTs is forecast for completion on March 30, 1998. The Characterization Program Office will take vapor samples to support DCRT USQ closure. Lightning air terminal installation restarted. The job control system work package was revised to require all overhead lights to be electrically isolated prior to air terminal installation. The Job Safety Analysis now requires a voltage potential check between all light casings and metal support prior to air terminal installation.</p>

1998

SCHEDULE VARIANCE ANALYSIS

WBS/PBS	SCHEDULE VARIANCE (\$11.6M)	
Tank Waste Characterization 1.1.2.4/TW01	Description and Cause: The unfavorable schedule variance (\$2.0M; 10%) is due to slipping acquisition of core samples due to delays in RMCS.	Impact: No major milestones are impacted at this time. Corrective Action: Improvements to the core sampling rate and management monitoring to ensure schedule recovery are being implemented. RMCS have commenced. Tracking of the analytical schedule has commenced to ensure the requirements for the TCRs are met.

1998

SCHEDULE VARIANCE ANALYSIS

WBS/PBS	SCHEDULE VARIANCE (\$11.6M)	
Retrieval Project 1.1.3.1/TW04	<p>Description and Cause: The unfavorable schedule variance (\$3.1M; 12%) has several causes. 1) Project Management Document Control Center deferral due to a higher cost proposal for implementation (\$167K), and deferring the technical baseline summary until after the Privatization contract award. 2) Feed process system definition work delayed initiation as ICD issue resolution engineering resources were diverted to higher priority scope. Usage issues for the 324 Building delayed starting the settle decant activities. Chromium removal work has been placed on hold, pending deletion. 3) Retrieval system definition is on hold pending project definition of alternative approaches to defining project requirements. SST work has been on hold as alternative baselines are evaluated. 4) Operations personnel diverted to higher priorities has deferred Light Duty Utility Arm (LDUA) training deployment, the unapproved Plan of Action is deferring readiness documentation, and the amount of ancillary equipment found in the AX farm was considerably more than what was expected, thus requiring additional effort to finalize the AX Tank Farm Equipment Inventory. 5) Project W-151, "Tank 101-AZ Waste Retrieval System," expense work to complete a readiness assessment was delayed as resources were diverted to support other higher</p>	<p>Impact: 1) Project Management has no impacts as sufficient contingency exists. 2) Feed process has no impacts, as sufficient contingency exists and resources are being restored now that the higher priority efforts are completed. 3) Retrieval work will be redefined, pending scoping studies which will create greater contingency in the schedule. 4) HTI has sufficient contingency to ensure no major milestones are impacted. 5) W-151's delay impacts the 241-AZ-101 process test; however, there is sufficient contingency to meet requirements. 6) W-320 has no impacts to milestones nor critical path work.</p> <p>Corrective Action: 1) Work on the document center is expected to begin as soon as a revised task order is issued. The update to the technical baseline summary will be completed after contract award. 2) ICD studies are being conducted and should be completed in time to support the July finalization. Revised guidance was issued to Pacific Northwest for the settle decant work, and 324 Building issues have been resolved. A BCR is being prepared to</p>

1998

SCHEDULE VARIANCE ANALYSIS

WBS/PBS	SCHEDULE VARIANCE (\$11.6M)	
Immobilized Tank Waste 1.1.3.4/TW09	Description and Cause: The unfavorable schedule variance (\$1.8M; 40%) is attributed to the deferral of baseline workscope due to increased cost for unplanned Pacific Northwest G&A charges, deferral of delisting activities, and a delay in starting the Project W-520, "Immobilized LAW Disposal Facility," CDR. The unfavorable variance is also attributed to the directed change (TWR-98-043) to Project W-464, "Solidified High Level Waste Interim Storage Facility," for the 4.5 meter canister, and BCR TWR-98-019 to defer the regulatory delisting workscope and the Accelerated Capsule Process Alternative activity.	Impact: The unfavorable schedule variance will increase until BCR TWR-98-043 is approved. Corrective Action: BCR TWR-98-019 was approved after month-end processing. The variance will be corrected upon implementation of the change request in March. Project W-520 was begun and will be completed on schedule. The remaining variance should be corrected once BCR TWR-98-043 is approved.
Process Waste Support 1.1.3.5/TW05	Description and Cause: The unfavorable schedule variance (\$0.5M; 8%) is because the Privatization Contractor's data associated with ICD 10, Deactivated Facility Site, input was received later than planned (\$19K). Work on the emission allocation study associated with ICD 22, Air Emissions, was not started as planned (\$11K). Within the WIT, a delay in the receipt of cost information from the privatization contractors caused the schedule slip. Independent reviewers schedule conflicts slipped completion from February until March 1998.	Impact: No impacts; sufficient contingency exists. Corrective Action: The necessary information will be provided after the Phase 1B Notification to Proceed (currently scheduled for May 25, 1998). Cost estimating activities and the aforementioned independent reviews are forecast to be complete in March 1998.

MILESTONE EXCEPTION REPORT

Number/ WBS	Level	Milestone Title	Baseline Date	Forecast Completion Date
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OVERDUE - 5 NOTE: Does not include 22 FY 1997 milestones that were not completed. BCR TWR-98-033 bridging the FY 1997/FY 1998 work scope is in process.

T21-97-453 RL 1.1.2.1	Complete Valve Manifold System in AW-A Valve Pit Cause: This milestone is not in the FY 1998 MYWP due to funding higher priority scopes. Impact: No impacts after pending BCR. Corrective Action: This milestone will be deleted through BCR TWR-98-033.	2/19/98 Proposed Deletion
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T21-97-454 RL 1.1.2.1	Complete Valve Manifold System in AW-B Valve Pit Cause: This milestone is not in the FY 1998 MYWP due to funding higher priority scopes. Impact: No impacts pending BCR approval. Corrective Action: This milestone will be deleted through BCR TWR-98-033.	1/19/98 Proposed Deletion
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T22-98-147 RL 1.1.2.2	Submit USQ Closure Package for JCO Facility Group 3A Interim Stabilization Tanks Cause: This milestone was replanned as part of Milestone T02-98-100 in the FY 1998 MYWP. Impact: No impacts. Milestone T02-98-100 is on schedule for September 30, 1998. Correction Action: This milestone will be deleted through BCR TWR-98-033.	2/2/98 Proposed Deletion
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T24-98-159 HQ 1.1.2.4	RL letter to Defense Nuclear Facilities Safety Board Reporting Complete Standard Inventory Estimates - All Tanks Cause: This milestone was replanned, and completed, as FY98 MYWP milestone T01-98-159. Impact: No impacts - FY 1998 milestone is complete. Corrective Action: A BCR will be processed to delete the obsolete milestone number.	11/26/97 Proposed Deletion
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MILESTONE EXCEPTION REPORT

Number/ WBS	Level	Milestone Title	Baseline Date	Forecast Completion Date
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T04-98-161 EA Initiate Sluicing Retrieval of C-106 (M-45-03A) 10/31/97 11/30/98
1.1.3.1

Cause: This milestone is in dispute resolution. There are safety concerns with the receiving tank and excess steam.

Impact: Initiation of sluicing is delayed.

Corrective Action: Pollution Control Hearing Board Hearing is scheduled for June 1998. An alternate schedule was developed and activities are on schedule for November 30, 1998, completion.

FORECAST DELAY - 8

T03-98-151 EA Start Interim Stabilization of 8 SSTs (M-41-23) 3/31/98 TBD
1.1.2.1

Cause: This milestone is in dispute resolution (BCR M-41-97-02).

Impact: M-41 interim milestones are impacted by flammable gas issues.

Corrective Action: A recovery plan is being developed and will be transmitted to Ecology by April 15, 1998.

T03-98-152 EA Start Interim Stabilization of 9 SSTs (M-41-24) 9/30/98 TBD
1.1.2.1

Cause: This milestone has been delayed due to flammable gas issues..

Impact: Interim stabilization will not occur as scheduled.

Corrective Action: A recovery plan is being developed and will be transmitted to Ecology by April 15, 1998.

MILESTONE EXCEPTION REPORT

Number/ WBS	Level	Milestone Title	Baseline Date	Forecast Completion Date
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T21-97-311 RL 1.1.2.1		Install New Transfer Pump in Tank 241-AW-104	9/30/98	Proposed deletion
Cause:		This milestone is not in the FY 1998 MYWP due to funding higher priority scopes.		
Impact:		No impacts after pending BCR.		
Corrective Action:		This milestone will be deleted through BCR TWR-98-033.		
T21-97-601 RL 1.1.2.1		Declare 241-B Farm Controlled, Clean, and Stable	9/30/98	Proposed deletion
Cause:		This milestone is not in the FY 1998 MYWP. This work will not be completed until after 2000 due to higher priorities (saltwell pumping) and funding constraints.		
Impact:		No impacts after pending BCR.		
Corrective Action:		This milestone will be deleted in BCR TWR-98-033.		
T21-97-912 RL 1.1.2.1		Complete Final Safety Analysis Review Transition	6/1/98	Proposed deletion
Cause:		This milestone is not in the FY 1998 MYWP due to funding higher priority scopes.		
Impact:		No impacts after pending BCR.		
Corrective Action:		This milestone will be deleted through BCR TWR-98-033.		
T22-97-148 RL 1.1.2.2		USQ Closure Package for JCO Facility Group 3B Non-interim Stabilization Tanks	3/23/98	Proposed deletion
Cause:		This milestone is not in the FY 1998 MYWP due to funding higher priority scopes.		
Impact:		No impacts after pending BCR.		
Corrective Action:		This milestone will be deleted through BCR TWR-98-033.		

MILESTONE EXCEPTION REPORT

Number/ WBS	Level	Milestone Title	Baseline Date	Forecast Completion Date
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T31-97-011 RL 1.1.3.1		Complete Phase I LDUA Deployment into 241-AX-104	3/31/98	Proposed deletion
Cause:		This milestone was replanned as key milestone T04-98-511 in the FY 1998 MYWP.		
Impact:		No impacts as the milestone was replanned.		
Corrective Action:		None required at this time.		
T31-97-220 RL 1.1.3.1		Final ISSTRS Concept Design	4/30/98	Proposed deletion
Cause:		This milestone is not in the FY 1998 MYWP due to funding higher priority scopes.		
Impact:		No impacts after pending BCR.		
Corrective Action:		This milestone will be deleted through BCR TWR-98-033.		